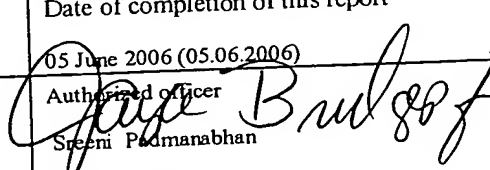


PATENT COOPERATION TREATY

U 016480-4

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty) (PCT Article 36 and Rule 70)

Applicant's or agent's file reference 34120	FOR FURTHER ACTION		See Form PCT/IPEA/416																								
International application No. PCT/US05/13594	International filing date (day/month/year) 21 April 2005 (21.04.2005)	Priority date (day/month/year) 26 April 2004 (26.04.2004)																									
International Patent Classification (IPC) or national classification and IPC IPC: A 61K 33/00,31/11 USPC: 514/693,706;424/718																											
Applicant CONOCOPHILLIPS COMPANY																											
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u> </u> sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) <u> </u>, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;"><input checked="" type="checkbox"/></td> <td style="width: 20%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>				<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand 06 March 2006 (06.03.2006)		Date of completion of this report 05 June 2006 (05.06.2006)																									
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		<div style="text-align: center;">  Authorized officer Sreeni Padmanabhan Telephone No. 571-272-0600 </div>																									

Form PCT IPEA/409 (cover sheet)(April 2005)

EXPRESS MAIL LABEL
NO.: EV 815 586 059 US

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US05/13594

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☒ the description:
- pages 1-11 as originally filed/furnished
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____
- ☒ the claims:
- pages 12-17 as originally filed/furnished
- pages* NONE as amended (together with any statement) under Article 19
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____
- ☒ the drawings:
- pages 1/2-2/2 as originally filed/furnished
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

** If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US05/13594**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <u>42-64</u>	YES
	Claims <u>1-41</u>	NO
Inventive Step (IS)	Claims <u>42-64</u>	YES
	Claims <u>1-41</u>	NO
Industrial Applicability (IA)	Claims <u>1-64</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations (Rule 70.7)

Claims 42-64 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the claimed invention.

Claims 1-41 lack novelty under PCT Article 33(2) as being anticipated by Reinsel et al. (Journal of Industrial Microbiology 1996, 17, pages 134-135).

Reinsel et al. discloses a method of inhibiting sulfide production by sulfate-reducing bacteria (SRB), wherein said method comprises contacting the SRB with a biocide, glutaraldehyde, and metabolite inhibitor, nitrite. See abstract, pages 134-135. The concentration of glutaraldehyde used was 0.1 mM, and nitrite was 3.57 mM. Thus, Reinsel anticipates instant claims 1-41.

Response to Applicant's arguments:

Applicant argues that "the effectiveness of glutaraldehyde and nitrite are tested separately, not in combination." This argument has been considered, but not found persuasive because Reinsel discloses a method of inhibiting sulfide production by sulfate-reducing bacteria (SRB) by contacting the column containing SRB with 1.0 mM glutaraldehyde, followed by contacting the same column with 3.57 mM nitrite, and thus meets instant claims. See page 133, bottom paragraph; page 134, left side, top paragraph.

Applicant argues that "claim 1 requires treatment of its SRB with a concentration less than about 90 % of the minimum inhibitory concentration of nitrite. Therefore, we respectfully submit that Reinsel neither discloses nor suggests the sequential treatment required in claim 1 in the subject application with the low concentration of metabolite inhibitor component of less than 90 % of the minimum inhibitory concentration." This argument has been considered, but not found persuasive as discussed above, and further Reinsel discloses the same method steps as instantly claimed, contacting the SRB first with the same amounts of biocide component as instantly claimed, followed by contacting SRB with 3.57 mM nitrite, metabolite inhibitor component, which is the same concentration range i.e. 0.1 mM to about 5 mM as instantly claimed, see instant claim 8. Thus, Reinsel anticipates instant claim 1.

Claims 1-64 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.